II. CLAIM AMENDMENTS

1. (Currently Amended) A method of growing semiconductor epitaxial layers on a substrate comprising the steps of:

providing a system which includes a substrate,

providing at least a first growth solution and optionally one or more further growth solutions, and

(i) exposing the substrate to the first growth solution, the growth solution being under a supersaturated condition such that a first layer grows on the surface of the substrate; and

(ii) optionally exposing the substrate to one or more further growth solutions, the further growth solutions being under a supersaturated condition such that one or more further layers grow on the surface of the first layer; and

(iii) uniformly varying the pressure of the system by varying the pressure of a non-growth source constituent gas to change the degree of supersaturation of the first growth solution or one or more further growth solutions to affect the growth of the first layer or one or more further layers.

2. (Original) A method according to claim 1 comprising

providing the first growth solution and the substrate at atmospheric pressure,

heating said growth solution to a temperature above its saturation temperature,

setting the temperature of the system at or below the saturation temperature,

varying the pressure so as to bring the first growth solution to supersaturation and

contacting the substrate with said supersaturated first growth solution so as to deposit material from the growth solution as a solid layer onto the substrate.

3. (Original) A method according to claim 1 comprising

providing the first growth solution and at least a second growth solution and the substrate at atmospheric pressure,

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heating each of said growth solutions to a temperature above its saturation temperature,

setting the temperature of the system at or below the saturation temperature of each growth solution,

varying the pressure of the system so as to bring the first growth solution to supersaturation,

contacting the substrate with the supersaturated first growth solution in order to deposit material from the first growth solution as a solid layer onto the substrate,

moving the substrate out of contact with the first growth solution,

varying the pressure of the system so as to change the supersaturation of the second growth solution

contacting the substrate with the supersaturated second growth solution in order to deposit material from the second growth solution as a solid layer on the first layer.

4. (Original) A method according to claim 3 comprising repeating the steps of moving the substrate out of contact with a growth solution, varying the pressure so as to change the supersaturation of the subsequent growth solution and contacting the substrate with said supersaturated subsequent growth solution in order to deposit material from said subsequent supersaturated growth solution as a solid layer.

5. (Original) A method according to claim 1 comprising the steps of providing the first growth solution and the substrate at atmospheric pressure, heating said first growth solution to a temperature above its saturation temperature, setting the temperature of the system at or below the saturation temperature, varying the pressure of the system so as to bring the first growth solution to supersaturation, bringing the substrate into contact with the growth solution and varying the pressure of the system whilst material is deposited onto the substrate from the first growth solution as a solid layer.

6. (Original) A method according to claim 1 comprising

providing the first growth solution and at least a second growth solution and the substrate at atmospheric pressure,

heating each of said growth solutions to a temperature above its saturation temperature,

setting the temperature of the system at or below the saturation temperature of each growth solution,

varying the pressure of the system so as to bring the first growth solution to supersaturation,

bringing the substrate into contact with the supersaturated first growth solution and varying the pressure of

the system whilst material is deposited onto the substrate from the first growth solution as a solid layer,

moving the substrate out of contact with the first growth solution,

varying the pressure of the system so as to change the supersaturation of the second growth solution,

bringing the substrate into contact with th3e supersaturated second growth solution and varying the pressure whilst material is deposited onto the substrate from the second growth solution as a solid layer.

7. (Original) A method according to claim 6 comprising

repeating the steps of moving the substrate out of contact with a growth solution, varying the pressure to change the supersaturation of a subsequent growth solution contacting the substrate with the supersaturated subsequent growth solution and varying the pressure of the system whilst material is deposited onto the substrate from the subsequent growth solution as a solid layer.

8. (Original) A method according to claim 1 wherein the temperature is at least 500°C.

9. (Original) A method according to claim 1 comprising setting the temperature of the system at or below the saturation temperature of the first growth solution and maintaining the temperature essentially constant throughout the method.

10. (Previously Amended) A method according to claim 1 wherein said semiconductor epitaxial layers comprise a system which includes III-V epitaxial lay rs.

11. (Original) A method according to claim 1 in which the semiconductor epitaxial layers comprise GaSb.

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